

REMARKS

Claims 1-38 will be pending upon entry of the present amendment. Claims 1-31 are being amended. Claims 32-38 are new. No new matter is presented.

Claims 1-31 are being amended to be in a standard US format, without “characterized in that” language and with antecedent bases for the elements of the claims. In addition, the passive tense of the steps are changed to the active tense, such as a change of “is synchronized” to “synchronizing.” Also, the language “a reference-frequency oscillator being re-adjusted by means of a final controlling element” is being removed as that structural language is not important to the patentability of method claims 1-29.

Applicants appreciate the indication on page 7 of the Office Action that claims 2-4, 7-14, 19-23, and 28-29 are directed to allowable subject matter.¹ Those claims are not being placed in independent form because Applicants respectfully submit that claim 1, from which those claims depend, is in condition for allowance for the reasons expressed below.

One embodiment is a method that synchronizes a carrier frequency of a mobile station with a carrier frequency of a base station based on temperature changes and location changes. In particular, the method separately determines or predicts frequency variations due to temperature changes and frequency variations due to location changes. In addition, the synchronizing occurs more often which large frequency variations are determined/predicted than when small frequency variations are determined/predicted. By determining or predicting temperature-based frequency variations separating from determining or predicting location-based frequency variations, the method allows the synchronization to occur even when a signal between the mobile and base stations is lost.

Claims 1, 5-6, 15-18, 24-27, and 30-31 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 7,177,602 to Ziren et al. (“Ziren”) in view of U.S. Patent No. 6,816,111 to Krasncr.

¹ Applicants note that the Office Action Summary incorrectly states that claims 1-32 were pending and that claims 2-4, 7-14, 17, and 28-30 were objected to. Only claims 1-31 were pending prior to the present amendment and the indication of claims objected to is not consistent with the statement on page 7 or with the detailed discussion of the claims on pages 2-7.

Ziren and Krasner do not teach or suggest the invention recited in claim 1. Among other things, claim 1 recites determining and/or predicting, separately from determining and/or predicting the frequency variation that occurs in the mobile station due to a change in the temperature of the mobile station, a frequency variation that occurs when there is a change in location of the mobile station relative to the base station. The Examiner recognizes on page 2 that Ziren does not disclose determining and/or predicting temperature-based frequency variations separately from determining and/or predicting location-based frequency variations

Like Ziren, Krasner does not teach or suggest determining and/or predicting temperature-based frequency variations separately from determining and/or predicting location-based frequency variations. The Examiner points to col. 2, line 50 to col. 3, line 5, but Applicants fail to find any mention of determining and/or predicting any frequency variations due to any change in location. Instead, that portion of Krasner refers to calibrating a GPS receiver based on a comparison of an externally transmitted signal, such as a cellular signal, with a GPS oscillator signal during sequential time periods. Nothing in the discussion of such a comparison states or implies any movement of either the GPS receiver or a cellular receiver. Rather, there seems to be no reason why the comparisons in the first and additional time would not occur while the GPS receiver is stationary.

Even if it were assumed that there were relative motion between Krasner's GPS receiver and a base station, Krasner still would not suggest determining and/or predicting any location-based frequency variations separately from any temperature-based frequency variations. Assuming that there were relative motion between Krasner's GPS receiver and a base station in the comparison of the first and second signals in the additional time period compared to the first time period would not provide any information on whether any measured frequency variation was caused by a temperature change or a location change. In other words, if both the temperature and location of the GPS receiver changed between the first and additional time periods, Krasner's calibration would be oblivious to whether any frequency variation was caused by the temperature change or the location change. Rather than employing two separate frequency variation determinations due to temperature- and location-based causes, Krasner simply

compares one signal to another signal regardless of what caused any measured change in frequency.

For the foregoing reasons, claim 1 is nonobvious in view of Ziren and Krasner. Claims 5-6, 15-18, and 24-27 depend on claim 1, and thus, are also nonobvious.

Although the language of claims 30-31 is not identical to that of claim 1, the allowability of claims 30-31 would be apparent in view of the above discussion.

New claim 32 depends on claim 1, claims 33-35 depend on claim 30, and claim 36-38 depend on claim 31. Thus, new claims 32-38 are allowable for the reasons expressed above. In addition, although the language of claims 33-38 is not identical to that of claims 2, 4, and 7, the allowability of claims 33-38 will be apparent if compared to claims 2, 4, and 7.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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